

## CLAIMS

1. A method for selecting a transmission channel from several transmission channels of a receiver of OFDM radio signals with antenna  
5 diversity, with a view to favouring the transmission channel delivering a signal with the lowest binary error rate, wherein the method consists of the estimation of the binary error rate for each transmission channel by feeding a neural network with data representative of the frequency response of the transmission channel.  
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2. The method according to Claim 1, in which the data representative of the frequency response of the transmission channel are diverted in the receiver at the output of a module for calculating the fast Fourier transform.  
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3. The method according to Claim 1, in which the neural network has undergone learning to evaluate, on the basis of the data representative of the response of the transmission channel, the power level of the signal on the transmission channel which would be necessary to obtain a  
20 predetermined binary error rate and in which the output of the neural network is processed with data representative of the actual power level of the signal on the transmission channel so as to evaluate the binary error rate for the transmission channel.
- 25 4. The method according Claim 1, in which the model of the neural network is a multilayer perceptron.
5. A receiver of OFDM signals with antenna diversity for implementing a method for selecting a transmission channel, comprising an OFDM signal  
30 processing chain whose input is linked to a plurality of antennas by way of a switch shifted so as to connect the input of the signal processing chain to the antenna which provides a signal exhibiting the lowest binary error

rate, the shifting of the switch being controlled on the basis of an information produced at the output of a neural network connected to estimating means providing data representative of the frequency response of the transmission channel.